

Listing of Claims:

Claim 1. (original) Water-insoluble silicate glass powder, wherein the silicate glass powder exhibits glass particles with the following composition in percentage by weight on an oxide basis:

SiO ₂	20 - 80
Na ₂ O	5 - 30
K ₂ O	0 - 5
P ₂ O ₅	0 - 15
B ₂ O ₃	0 - 10
CaO	4 - 30
MgO	0 - 8
Al ₂ O ₃	0 - 7
Fe ₂ O ₃	0 - 2

as well as conventional fining agents in conventional quantities, characterized in that the glass particles contain at least one of the following components

ZnO
AgO
CuO
CeO₂
GeO₂
TeO₂

wherein these components are concentrated in the regions of the glass particles that are near the surface.

Claim 2. (original) Water-insoluble, antimicrobial silicate glass powder in accordance with Claim 1, characterized in that the regions near the surface contain the components in a concentration > 100 ppm and < 8 percent by weight.

Claim 3. (currently amended) Water-insoluble, antimicrobial silicate glass powder in accordance with ~~any one of Claims 1 or 2~~ Claim 1, characterized in that the composition exhibits the following in percentage by weight on an oxide basis:

SiO ₂	38 - 65
Na ₂ O	10 - 30
P ₂ O ₅	4 - 15
B ₂ O ₃	0 - 3
CaO	10 - 30

Claim 4. Water-insoluble, antimicrobial silicate glass powder in accordance with ~~any one of Claims 1 or 2~~Claim 1, characterized in that the composition exhibits the following in percentage by weight on an oxide basis:

SiO ₂	50 - 80
Al ₂ O ₃	0 - 1
CaO	4 - 15
MgO	0 - 8
Fe ₂ O ₃	0 - 2
Na ₂ O	5 - 20
K ₂ O	0 - 2

Claim 5. (currently amended) Water-insoluble, antimicrobial silicate glass powder in accordance with ~~any one of Claims 1 through 5~~Claim 1, characterized in that the size of the particles of the glass powder is < 100 µm, < 50 µm, < 20 µm, preferably < 5 µm, especially preferably < 2 µm.

Claim 6. (original) Water-insoluble, antimicrobial silicate glass powder in accordance Claim 5, characterized in that the particles with a size < 5 µm can be obtained by attritor grinding of the glass in water.

Claim 7. (original) Method for production of water-insoluble antimicrobial silicate glass powders comprising the following steps:

a silicate glass with the following composition in percentage by weight on an oxide basis:

SiO ₂	20 - 80
Na ₂ O	5 - 30
K ₂ O	0 - 5

P_2O_5	0 - 15
B_2O_3	0 - 10
CaO	4 - 30
MgO	0 - 8
Al_2O_3	0 - 7
Fe_2O_3	0 - 2

as well as conventional fining agents in conventional quantities is melted, after that the silicate glass ground is into glass particles, the glass particles are antimicrobially finished with one or more of the following ions

Zn

Ag

Cu

Ce

Ge

Te

by means of one or more of the following processing steps:

- ion exchange in salt baths
- application of metalliferous solutions and suspensions
- firing of saline pastes
- firing of metalliferous solutions and suspensions
- grinding of the silicate glass into glass particles in metalliferous, in particular aqueous solutions and suspensions.

Claim 8. (original) Method according to Claim 7, characterized in that the compositions contained in the melts, solutions and suspensions, which are carriers of Ag, Zn or Cu, comprise one or more of the following compounds:

Ag chloride

Ag nitrate

Ag oxide

Ag

Ag organic compounds

Ag inorganic compounds

Cu oxide

Zn oxide

Zn nitrate

Zn chloride

Cu, Zn organic compounds

Cu, Zn inorganic compounds

as well as all other compounds, comprising in particular all salts of antimicrobially active ions, such as e.g., Ag, Cu, Zn, Sn, which are stable at room temperature or are stable up to the temperature of the tempering or in the applied solution or suspension.

Claim 9. (original) Method according to Claim 8, characterized in that one or more of the following ions Zn, Ag, Cu, Ce, Ge are concentrated in the regions of the glass particles near the surface.

Claim 10. (currently amended) Method in accordance with ~~any one of Claims 8 through 9~~Claim 8, characterized in that the size of the glass particles of the glass powder is $< 100\ \mu\text{m}$, $< 50\ \mu\text{m}$, $< 20\ \mu\text{m}$, preferably $< 5\ \mu\text{m}$, especially preferably $< 2\ \mu\text{m}$.

Claim 11. (currently amended) Use of glass powders with antimicrobial glass surface produced according to a method in accordance with ~~Claims 8 through 10~~Claim 8 in the foodstuffs sector.

Claim 12. (currently amended) Use of glass powders with antimicrobial glass surface produced according to a method in accordance with ~~Claims 8 through 10~~Claim 8 in the household.

Claim 13. (currently amended) Use of glass powders with antimicrobial glass surface produced according to a method in accordance with ~~Claims 8 through 10~~Claim 8 in pharmacy and biotechnology.

Claim 14. (currently amended) Use of glass powders with antimicrobial glass surface

produced according to a method in accordance with ~~Claims 8 through 10~~Claim 8 in the sector of cultivation.

Claim 15. (currently amended) Use of glass powders with antimicrobial glass surface produced according to a method in accordance with ~~Claims 8 through 10~~Claim 8 in the sector of displays.

Claim 16. (currently amended) Use of glass powders with antimicrobial glass surface produced according to a method in accordance with ~~Claims 8 through 10~~Claim 8 in the field of medical technology.

Claim 17. (currently amended) Use of glass powders with antimicrobial glass surface produced according to a method in accordance with ~~Claims 8 through 10~~Claim 8 in the sector of hospitals and practices.

Claim 18. (currently amended) Use of glass powders with antimicrobial glass surface produced according to a method in accordance with ~~Claims 8 through 10~~Claim 8 as glass bottom in cooling units, in particular in refrigerators.

Claim 19. (original) Glass ceramic powder, wherein the glass ceramic powder comprises glass ceramic particles, characterized in that the glass ceramic particles contain at least one of the following components

ZnO

AgO

CuO

CeO₂

GeO₂

TeO₂

wherein these components are concentrated in the regions of the glass ceramic particles that are near the surface.

Claim 20. (original) Glass ceramic powder in accordance with Claim 19, characterized in that

the regions that are near the surface contain the components in a concentration > 100 ppm and < 8 percent by weight.

Claim 21. (currently amended) Glass ceramic powder in accordance with ~~any one of Claims 19 through 20~~Claim 19, characterized in that the source glass composition of the glass ceramic exhibits the following in percentage by weight on an oxide basis:

SiO ₂	55 - 69
Al ₂ O ₃	19 - 25
P ₂ O ₅	0 - 1.0
TiO ₂	1.0 - 5.0
ZrO ₂	0.5 - 2.5
Li ₂ O	3.0 - 4.0
Na ₂ O	0 - 1.0
K ₂ O	0 - 0.6
Σ Na ₂ O + K ₂ O	0.2 - 1.0
MgO	0 - 1.5
CaO	0 - 0.5
SrO	0 - 1.0
BaO	0 - 2.5
Σ CaO + SrO + BaO	0.2 - 3.0
ZnO	1.0 - 2.2

Claim 22. (currently amended) Glass ceramic powder in accordance with ~~any one of Claims 19 through 21~~Claim 19, characterized in that the source glass composition of the glass ceramic exhibits the following in percentage by weight on an oxide basis:

SiO ₂	66 - 68
Al ₂ O ₃	19 - 25
TiO ₂	2.0 - 3.0
ZrO ₂	1 - 2.5
Li ₂ O	3.0 - 4.0
Na ₂ O	0 - 1.0
K ₂ O	0 - 0.6

$\Sigma \text{Na}_2\text{O} + \text{K}_2\text{O}$	0.2 – 1.0
MgO	0 - 1.5
CaO	0 – 0.5
SrO	0 - 1.0
BaO	0 – 1.0
ZnO	0 – 2.0

Claim 23. (currently amended) Glass ceramic powder in accordance with ~~any one of Claims 19 through 22~~ Claim 19, characterized in that the size of the particles of the glass ceramic powder is $< 100 \mu\text{m}$, $< 50 \mu\text{m}$, $< 20 \mu\text{m}$, preferably $< 5 \mu\text{m}$, especially preferably $< 2 \mu\text{m}$.

Claim 24. (currently amended) Glass ceramic powder in accordance with ~~any one of Claims 19 through 23~~ Claim 19, characterized in that particles with a size $< 5 \mu\text{m}$ can be obtained by attritor grinding of the glass in water.

Claim 25. (original) Method for the production of antimicrobial glass ceramic powders comprising the following steps:

a source glass is melted,
 after that the source glass is ceramized into a glass ceramic
 after that the glass ceramic is ground into glass ceramic particles,
 the glass ceramic particles are antimicrobially finished with one or more of the following ions

Zn

Ag

Cu

Ce

Ge

Te

by means of one or more of the following processing steps:

-ion exchange in salt baths

-application of metalliferous solutions and suspensions

-firing of metalliferous solutions and suspensions

-firing of saline pastes

grinding of the glass ceramic into ceramic glass particles in metalliferous, in particular aqueous solutions and suspensions.

Claim 26. (original) Method according to Claim 25, characterized in that the compositions contained in the melts, solutions and suspensions, which are carriers of Ag, Zn or Cu, comprise one or more of the following compounds:

Ag chloride

Ag nitrate

Ag oxide

Ag

Ag organic compounds

Ag inorganic compounds

Cu oxide

Zn oxide

Zn nitrate

Zn chloride

Cu, Zn organic compounds

Cu, Zn inorganic compounds

as well as all other compounds, comprising in particular all salts of antimicrobially active ions, such as e.g., Ag, Cu, Zn, Sn, which are stable at room temperature or are stable up to the temperature of the tempering or in the applied solution or suspension.

Claim 27. (original) Method according to Claim 26, characterized in that one or more of the following ions Zn, Ag, Cu, Ce, Ge are concentrated in the regions of the glass ceramic particles that are near the surface.

Claim 28. (currently amended) Method in accordance with ~~any one of Claims 25 through 27~~ Claim 25, characterized in that the size of the glass ceramic particles of the glass ceramic powder is $< 100\ \mu\text{m}$, $< 50\ \mu\text{m}$, $< 20\ \mu\text{m}$, preferably $< 5\ \mu\text{m}$, especially preferably $< 2\ \mu\text{m}$.

Claim 29. (currently amended) Use of glass ceramic powders with antimicrobial glass ceramic surface produced according to a method in accordance with ~~Claims 25 through 28~~Claim 25 in the foodstuffs sector.

Claim 30. (currently amended) Use of glass ceramic powders produced according to a method in accordance with ~~Claims 25 through 28~~Claim 25 in the household.

Claim 31. (currently amended) Use of glass ceramic powders produced according to a method in accordance with ~~Claims 25 through 28~~Claim 25 in pharmacy and biotechnology.

Claim 32. (currently amended) Use of glass ceramic powders produced according to a method in accordance with ~~Claims 25 through 28~~Claim 25 in the sector of cultivation.

Claim 33. (currently amended) Use of glass powders produced according to a method in accordance with ~~Claims 25 through 28~~Claim 25 in the sector of displays.

Claim 34. (currently amended) Use of glass powders produced according to a method in accordance with ~~Claims 25 through 28~~Claim 25 in the field of medical technology.

Claim 35. (currently amended) Use of glass powders produced according to a method in accordance with ~~Claims 25 through 28~~Claim 25 in the sector of hospitals and practices.

Claim 36. (currently amended) Use of glass powders produced according to a method in accordance with ~~Claims 25 through 28~~Claim 25 as glass bottom in cooling units, in particular in refrigerators.